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THE DIRECTV GROUP INC
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EXAMINER

HOYE, MICHAEL W

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/534,898

Applicant(s)

ARSENAULT ET AL.

Examiner

Michael W. Hoyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicants' arguments filed on 2/204 have been fully considered but they are not persuasive.

As to independent claims 1, 11 and 16, the Applicants' argue that, "none of the cited references discloses or suggests the use of cache program data comprising broadcast programming and a boot object having location information associated with cache program data and requiring storage of the cache program data. Further, the cited references fail to disclose or suggest identifying where data for a cache program (e.g., video data and audio data of broadcast programming) is found for a receiver station and requiring the receiver station to store the cache program data".

More specifically, the Applicants' argue that, "Hawkins et al. fails to disclose or suggest the use of cache program data comprising broadcast programming. Further, the boot code of Hawkins et al. fails to identify, for example, a transponder frequency and service channel identification (SCID) numbers where cache program data may be found, and to mandate storage of cache program data."

In response, the Examiner respectfully disagrees with the Applicants because the Hawkins et al reference discloses cache program data comprising broadcast programming as met by the media objects and cache objects as described in col. 12, lines 25-30, line 47 – col. 13, line 13, lines 22-25 and col. 13, line 62 – col. 14, line 11), where the broadcast programming is specifically met by the broadcast data stream which includes music, still photos, short video,

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advertisements, etc. In addition, Hawkins discloses the claimed transmitting the program data and a boot object having a cache program object to identify location information associated with the cache program data and to require storage of the cache program data as met by transmitting the broadcast data stream comprising media objects and object code (for the boot code or boot object) to the end-user terminal (see col. 12, lines 25-30 and col. 12, line 47 – col. 13, line 13, lines 22-25), where the location information is specifically met by the frequency information embedded in the boot code (col. 13, line 62 – col. 14, line 11), and the claimed requiring storage of the cache program data is met by the boot code in the broadcast data stream causing the end-user terminal to cache information as required (col. 12, lines 25-29). Hawkins discloses storing the cache program data based on location information stored in the boot object as described above where the frequency embedded in the boot code gives the location information for storing the components of the broadcast data stream in cache memory.

In response to Applicants' argument that the references fail to show certain features of Applicants' invention, it is noted that the features upon which Applicants rely (i.e., to identify a transponder frequency and service channel identification (SCID) numbers where cache program data may be found, and in addition, to transmit program data of broadcast programming once, to require storage of the program data of broadcast programming in a cache, and to cache the program data prior to the broadcast programming being available for viewing and without a viewer's prior request.) are not recited in the rejected independent claims 1, 11 and 16. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Regarding the Wood et al reference, the Applicants argue that, "Wood et al. fails to identify via a boot object, for example, a transponder frequency and service channel identification (SCID) numbers where data for a cache program is found much less that a boot object could or should be used to mandate the storage of cache program data."

In response, the Examiner respectfully disagrees with the Applicants because while the Wood et al reference does not explicitly teach a boot object, the Wood et al reference is used in combination with the Hawkins et al reference, which specifically discloses the use of boot objects, as described in the rejections below.

In response to Applicants' argument that the references fail to show certain features of Applicants' invention, it is noted that the features upon which Applicants rely (i.e., to identify...a transponder frequency and service channel identification (SCID) numbers where cache program data may be found, and in addition, to allow a broadcaster to designate a program to cache and inform the receiver station of the location of data corresponding to the designated cache program...[and to require] storage of program data in the receiver station without a subscriber's prior request to do so.) are not recited in the rejected independent claims 1, 11 and 16. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding the Walters et al, Gudesen and Tsuria et al references, the references are used in the rejections in combination with the Hawkins et al and Wood et al base references in order to provide the additional teachings as claimed in the corresponding dependent claims.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 11 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hawkins et al (USPN 6,005,561), cited by the Examiner.

As to claim 11, note the Hawkins et al reference, which discloses a method to transmit television content and program data. The claimed organizing program data including scheduled program data, program guide data, and cache program data comprising broadcast programming into objects is met by the media objects and cache objects as described in col. 12, lines 25-30, line 47 – col. 13, line 13, lines 22-25 and col. 13, line 62 – col. 14, line 11), where the broadcast programming is specifically met by the broadcast data stream which includes music, still photos, short video, advertisements, etc. The claimed transmitting the program data and a boot object having a cache program object to identify location information associated with the cache program data and to require storage of the cache program data is met by transmitting the broadcast data stream comprising media objects and object code (for the boot code or boot object) to the end-user terminal (see col. 12, lines 25-30 and col. 12, line 47 – col. 13, line 13, lines 22-25), the location information is met by the frequency information embedded in the boot code (col. 13, line 62 – col. 14, line 11), and the requiring storage of the cache program data is met by the boot code in the broadcast data stream causing the end-user terminal to cache information as required (col. 12, lines 25-29). Hawkins discloses storing the cache program data

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based on location information stored in the boot object as described above where the frequency embedded in the boot code gives the location information for storing the components of the broadcast data stream in cache memory.

As to claim 22, the claimed cache program data comprises at least one of video data and audio data of broadcast programming is met by the media objects and cache objects within the broadcast data stream which includes music, still photos, short video, advertisements, etc. (see col. 12, lines 25-30, line 47 – col. 13, line 13, lines 22-25 and col. 13, line 62 – col. 14, line 11).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 7, 16, 20-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al (US 2002/0054752), in view of Hawkins et al, both cited by the Examiner.

As to claim 1, note the Wood et al reference, which discloses a method of transmitting, receiving, storing and displaying television program data. The claimed transmitting program data including scheduled program data, program guide data, and cache program data comprising broadcast programming is met by the channel guide data source 109 (Fig. 1 & p. 2, ¶[0026]), which contains the scheduled program data, the program guide data, and also the video data and meta data for a show selected for recording (p. 2, ¶[0026], p. 3, ¶[0040]), in addition, the cache

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program data comprising broadcast programming is also met by the video input source 106 in Fig. 1 (see p. 2, ¶[0032]). The claimed receiving the program data is met by receiving broadcast updates and changes from the channel guide data source 109 (Fig. 1 & p. 2, ¶[0026]). The claimed storing the cache program data is met by a locally attached disk or alternative storage media such as RAM (p. 2, ¶[0027]) and the program is stored on video storage 105 (Fig. 1 & p. 2, ¶s[0028]-[0029], also see storing the video data [0040]). The claimed selecting a cache television program is met by selecting a personal channel from the display which contains the cached or recorded television program (Fig. 10 & p. 4, ¶s[0059]-[0061], also see p. 3, ¶[0039]). The claimed retrieving a portion of the cache program data that corresponds to the selected cache television program is met by a user accessing information from the personal channel related to the selected cached or recorded program (p. 4, ¶[0064]), also see p. 3, ¶[0040]). The claimed generating a display of a television program for viewing based upon the retrieved portion of cache program data is met by Fig. 10 where the cached or recorded programs are listed as the personal channels in the personal channel guide or user interface, and information related to the highlighted program is listed in the upper portion of the display, and the program may be viewed by selecting it from the guide or user interface (p. 4, ¶s[0059]-[0061]). Wood et al does not specifically disclose a transmitting a boot object having location information associated with the cable program data and requiring storage of the cache program data, and storing the cache program data based on location information stored in the boot object. Hawkins et al discloses an end-user terminal that includes cache memory (see Fig. 7 & col. 12, lines 25-30), and teaches a boot object as met by the boot code in objects provided in the broadcast data stream (see col. 12, line 47 – col. 13, line 13, lines 22-25 and col. 13, line 62 – col. 14, line 11), with location

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information as met by the frequency information embedded in the boot code (col. 14, lines 1-11), and the requiring storage of the cache program data is met by the boot code in the broadcast data stream causing the end-user terminal to cache information as required (col. 12, lines 25-29).

Hawkins discloses storing the cache program data based on location information stored in the boot object as described above where the frequency embedded in the boot code gives the location information for storing the components of the broadcast data stream in cache memory.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of transmitting, receiving, storing and displaying of Wood et al to further include the teachings of Hawkins that include transmitting a boot object for the advantages of allowing a broadcaster to specify location information and require storage of cache program data in end-user terminals, in addition to providing frequent boot object transmissions in the event the power is lost and restored to a terminal.

As to claim 2, the claimed storing of the cache program is based upon identifying an identifier associated with the cache program data is met by the Wood et al reference through identifying the user selected or specified criteria (p. 2, ¶'s [0028]-[0029], [0037]-[0039]) or through identifying criteria or identifiers based on "fuzzy match logic" (p. 23 ¶[0053]). In addition, the Hawkins reference discloses downloading components of the broadcast data stream, which includes various media objects, for storage in cache memory (col. 12, lines 25-30), based on a particular frequency that the cache program data is associated with.

As to claim 7, the claimed transmitting identification data that instructs a receiver about the identifier associated with the cache program data is met by the transmitted video data and meta data as disclosed in the Wood et al reference (p. 3, ¶'s [0040]-[0042]). In addition, the

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Hawkins reference as discloses the boot code that contains identification data that instructs a receiver or end-user terminal about the frequency associated with the cache program data (see col. 13, line 62 – col. 14, line 11 & col. 13, lines 1-13 & 22-25).

As to claim 16, the claimed method to process television content and program data comprising receiving program data...is rejected based on the same or similar arguments made in the rejection of claim 1.

As to claim 20, the Hawkins et al reference as combined with the Wood et al reference discloses a boot object comprising a particular frequency or control channel where the broadcast data stream for the cache program data may be located as described above (see col. 14, lines 1-11 and claim 1 above). Hawkins does not explicitly disclose that the boot object comprises a service channel identification (SCID) number identifying the location of the cache program. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to specifically use a SCID for identifying the location of the cache program for the advantage of providing a specific source channel id number in the boot object. One of ordinary skill in the art would have been led to make such a modification since a channel frequency and a source channel identification are essentially the same and SCIDs are well known in the art of video distribution systems and methods.

As to claims 21 and 23, the claimed cache program data comprises at least one of video data and audio data of broadcast programming is met by both the Wood et al reference where the cache program data comprises both vide and audio data of broadcast programming (see p. 2, ¶[0032], and p. 3, ¶[0040]), and by the Hawkins et al reference where the media objects and cache objects within the broadcast data stream include music, still photos, short video,

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advertisements, etc. (see col. 12, lines 25-30, line 47 – col. 13, line 13, lines 22-25 and col. 13, line 62 – col. 14, line 11).

6. Claims 3-5 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al, in view of Hawkins et al, in further view of Walters et al (USPN 5,710,970), all cited by the Examiner.

As to claim 3, the Wood et al reference is silent as to the claimed a transmission rate of the cache program data is different than a retrieval rate of the cache program data. Hawkins discloses optimizing transmissions (col. 17, lines 6-9) and required bandwidth for transmission and access times (col. 19, lines 36-47), but does not specifically disclose that the transmission rate of the cache program data is different than a retrieval rate of the cache program data. The Walters et al reference teaches a transmission rate of the cache program data is different than a retrieval rate of the cache program data as described in col. 3, lines 37-63, where the transmission rate is much faster or higher than the subscriber access time through the use of a high speed compressed digital video transmission rate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of transmitting, receiving, storing and displaying television program data of Wood et al and Hawkins with the high speed compressed digital video transmission rate as taught by Walters et al. One of ordinary skill in the art would have been led to make such a modification since transmitting programs in a compressed digital format would allow the user to view a program much faster than if the program was transmitted in real time, in addition, the subscriber would be able to accumulate a plurality of programs in a relatively short amount of time.

As to claim 4, as noted above, the claimed transmission rate of the cache program data is higher than the retrieval rate of the cache program data is met by the Walters et al reference.

As to claim 5, the Walters et al reference further teaches the claimed transmission rate of the cache program data is approximately twice the retrieval rate of the cache program data as described in col. 3, lines 61-63, where a different transmission rate may be used which could be approximately twice as fast as the subscriber access time through the use of a high speed compressed digital video transmission rate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further combine the method of transmitting, receiving, storing and displaying television program data of Wood et al and Hawkins with the high speed compressed digital video transmission rate as taught by Walters et al where the compressed digital video transmission rate could be approximately twice the retrieval rate of the cache program data or subscriber access time. One of ordinary skill in the art would have been led to make such a modification since transmitting programs in a compressed digital format would allow the user to view a program much faster than if the program was transmitted in real time, in addition, the subscriber would be able to accumulate a plurality of programs in a relatively short amount of time. Moreover, Walters et al teaches various compressed digital video transmission rates, so having a transmission rate at approximately twice the retrieval rate would have been an obvious design choice for the transmission rate since very high compression rates may be difficult to achieve and using an approximate rate of 2 to 1 for the ratio of transmission to retrieval is commonly used for compressed transfer modes.

As to claims 17 and 18, the claims are rejected based on the same arguments made in the rejection of claims 3 and 4 respectively.

7. Claims 6, 8-9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al, in view of Hawkins et al, in further view of Gudesen (USPN 5,761,607), all cited by the Examiner.

As to claim 6, the Wood et al reference is silent as to the claimed transmission rate of the cache program data is lower than a retrieval rate of the cache program data. Hawkins discloses optimizing transmissions (col. 17, lines 6-9) and required bandwidth for transmission and access times (col. 19, lines 36-47), but does not specifically disclose that the transmission rate of the cache program data is lower than retrieval rate of the cache program data. The Gudesen reference teaches a transmission rate of the cache program data is lower than a retrieval rate of the cache program data in col. 6, lines 27-41, where transmission or updating can be performed by transferring data via phone lines with low capacity or by using other transmission means, such as, satellite lines, cable networks, radio lines, etc. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of transmitting, receiving, storing and displaying television program data of Wood et al and Hawkins with the low capacity method of Gudesen. One of ordinary skill in the art would have been led to make such a modification since transmitting programs in a low capacity format that is slower or lower than the retrieval rate of the cache program data would allow the local cache or mass storage unit to acquire the cache program data over a longer period of time which would free up a significant amount of bandwidth in the transmission medium.

As to claim 8, the claimed maintaining a record of selection representing selected cache television programs is met by the Wood et al reference where a record of the viewing history or

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habits of the programs that have been recorded, stored, or cached by the user is maintained (pgs. 3-4, ¶[0053]). The Wood et al and Hawkins references are silent as to assessing a fee based upon the record of selection. The Gudesen reference teaches assessing a fee based upon the record of selection (col. 6, lines 5-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of maintaining a record of selection representing selected cache television programs as taught by the Wood et al reference with the method of assessing a fee based upon the record of selection as taught by the Gudesen reference. One of ordinary skill in the art would have been led to make such a modification since it is well known in the art of video distribution systems with pay-per-view or purchasing methods to maintain a record of the program viewed and/or recorded and assess a fee based on the selection made.

As to claim 9, the Wood et al reference teaches the record of selection is maintained at the receiver as met by the record of the viewing history or habits of the programs that have been recorded by the user are inherently maintained at the receiver (pgs. 3-4, ¶[0053]).

As to claim 19, the claim is rejected based on the same arguments made in the rejection of claim 6.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al, in view of Hawkins et al, in further view of Gudesen, as applied to claim 8 above, and in further view of Tsuria et al (USPN 6,424,947), all cited by the Examiner.

As to claim 10, the Wood et al, Hawkins et al and Gudesen references are silent as to the record of selection is maintained in a memory of an access card at the receiver. The Tsuria et al

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reference teaches the use of an access card or “smart card” that may collect and store specific information, such as information related to viewing or purchasing habits of the subscriber (see col. 8, lines 49-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the methods taught by the Wood et al, Hawkins and Gudesen references with the method of maintaining the record of selection in a memory of an access card at the receiver as taught by the Tsuria et al reference. One of ordinary skill in the art would have been led to make such a modification since it is well known in the art of video distribution systems with pay-per-view or purchasing methods to use access cards or “smart cards” at the receiver to maintain a record of the program viewed and/or recorded and assess a fee based on the selection made.

9. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins et al, in view of Walters et al.

As to claims 12 and 13, the claims are rejected based on similar rejections made for claims 3 and 4 above.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins et al, in view of Gudesen.

As to claim 14, the claim is rejected based a similar rejection made for claim 6 above.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins et al.

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As to claim 15, the Hawkins et al reference discloses a boot object comprising a particular frequency or control channel where the broadcast data stream for the cache program data may be located as described above (see col. 14, lines 1-11 and claim 1 above). Hawkins does not explicitly disclose that the boot object comprises a service channel identification (SCID) number identifying the location of the cache program. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to specifically use a SCID for identifying the location of the cache program for the advantage of providing a specific source channel id number in the boot object. One of ordinary skill in the art would have been led to make such a modification since a channel frequency and a source channel identification are essentially the same and SCIDs are well known in the art of video distribution systems and methods.

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure.

Morrison (USPN 5,815,671) – Discloses a method and apparatus for encoding and storing audio/video information for subsequent predetermined retrieval.

Stefik et al (USPN 5,634,012) – Discloses a system for controlling the distribution and use of digital works having a fee reporting mechanism.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael W. Hoye whose telephone number is (703) 305-6954. The Examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, John Miller, can be reached at (703) 305-4795.

Any response to this action should be mailed to:

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **(703) 308-HELP**.

Michael W. Hoyer
April 3, 2004



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600